

**CAPITAL PROFILE REPORT**

PROFILE NAME:	<b>ACTIVE AIR &amp; SURFACE PURIFICATION TECHNOLOGY FOR ETS &amp; DATS FLEET</b>	<b>RECOMMENDED</b>
PROFILE NUMBER:	<b>21-61-3411</b>	<b>PROFILE STAGE: Council Review</b>
DEPARTMENT:	<b>City Operations</b>	<b>PROFILE TYPE: Standalone</b>
LEAD BRANCH:	<b>Edmonton Transit Service</b>	LEAD MANAGER: <b>Carrie Hotton-MacDonald</b>
PROGRAM NAME:		PARTNER MANAGER: <b>Eddie Robar</b>
PARTNER:	<b>Fleet &amp; Facility Services</b>	ESTIMATED START: <b>June, 2021</b>
BUDGET CYCLE:	<b>2019-2022</b>	ESTIMATED COMPLETION: <b>December, 2022</b>

**Service Category: Public Transit****Major Initiative:**

<b>GROWTH</b>
<b>100</b>

<b>RENEWAL</b>

**PREVIOUSLY APPROVED:**

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**BUDGET REQUEST:****5,898****TOTAL PROFILE BUDGET:****5,898****PROFILE DESCRIPTION**

Install and implement Active Air and Surface purification technology such as UV PHI Air Purification or Proactive Air and Surface Purification ("PASP") to safely sanitize both the air and surfaces in the Edmonton Transit Service (ETS) bus fleet, including Disabled Adult Transit Service (DATS).

Initial studies have proven that this technology helps to manage and prevent COVID-19 transmission and improve overall air quality. There have been recent recommendations from the Edmonton Transit Service Advisory Board (ETSAB) at the Urban Planning Committee (UPC) to improve the air circulation in our transit service, so implementation of this technology would be timely. As transit ridership increases, the amount of riders on one bus will be higher, decreasing the ability to practice physical distancing. Transmission and spread of COVID-19 can happen quickly in crowded spaces, especially with the new variant strains.

Through an RFI process, the effectiveness of this technology in reducing the risk of COVID-19 transmission will be validated. Early trials in the Capital District Transportation Authority (Albany, New York) are showing extremely positive results in combating the COVID-19 virus. That group has conducted scientific research showing the technology's effectiveness amongst their bus fleet, enabling a significant reduction in the frequency of their electrostatic spraying requirements.

**PROFILE BACKGROUND**

Exploration of installing Active Air and Surface purification technology such as UV PHI Air Purification or Proactive Air and Surface Purification ("PASP") to safely sanitize both the air and surfaces in the Edmonton Transit Service (ETS) bus fleet is underway. This initiative will focus on implementing Active Air and Surface purification technology on the ETS fleet including, Disabled Adult Transit Service (DATS). This initiative excludes LRT implementation, however, depending on the outcomes there could be potential for future deployment within LRT cars. Independent 3rd party test results have shown overall bacteria count reductions of 99%+, demonstrating the ability to deactivate the SARS-CoV-2 virus (which causes COVID-19), H1N1, Avian Flu, MRSA, E.coli, bacterial, mold, and carcinogens virus.

**PROFILE JUSTIFICATION**

From the start of the pandemic, Administration has implemented many safety measures that mitigate COVID-19 risks quickly and continue to align with AHS guidelines. Air and Surface Purification technology would support commitment to further safety enhancements for staff, community and transit riders. ETS is on a path to ridership recovery, and safety and security is a critical lever for supporting people to use transit and make ridership decisions.

**STRATEGIC ALIGNMENT**

This technology has the potential to better the lives of Edmontonians while supporting innovation. The collaboration aligns with the guiding values under 'catalyze and converge' in the City Plan by promoting our city as a place where we must continuously strive to be a centre of innovation, creativity and technology, harnessing and fueling our city's growing passion and entrepreneurship. In Connect Edmonton, business innovation is a key indicator of regional prosperity that measures startups and patents in the Edmonton region.

**ALTERNATIVES CONSIDERED**

This is an additional COVID-19 safety enhancement that will make transit even safer. It does not replace existing enhanced cleaning and disinfecting practices, it adds an additional layer to the plan.

**COST BENEFITS**

As a result of the pandemic, there has been a reduction in transit ridership from March 2020 and has persisted through to the present. In total, 2020 fare product sales revenue was down 57% of 2019 revenue (approximately \$66 million). This initiative would increase public confidence in ETS by using the latest emerging technology to combat airborne and surface viruses for sanitization purposes and help to adjust public perceptions around shared spaces/transit which have shifted post COVID.

**KEY RISKS & MITIGATING STRATEGY**

Timing of testing/implementation, as this is an initiative dealing with emerging technology, the release of funds (to be spent) and the required time for due diligence to further investigate the opportunity may present a challenge.

**RESOURCES**

Bus assets and the related maintenance is the responsibility of Fleet and Facility Services.

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## CONCLUSIONS AND RECOMMENDATIONS

This initiative would increase public confidence in ETS by using the latest emerging technology to combat airborne and surface viruses for sanitization purposes and presents an opportunity to leverage funding for COVID-19 recovery for a longer term initiative.

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PROFILE NAME: **Active Air & Surface Purification Technology for ETS & DATS Fleet****RECOMMENDED**PROFILE NUMBER: **21-61-3411**PROFILE TYPE: **Standalone**BRANCH: **Edmonton Transit Service**

## CAPITAL BUDGET AND FUNDING SOURCES (000's)

APPROVED BUDGET		Prior Years	2021	2022	2023	2024	2025	2026	2027	2028	2029	Beyond 2029	Total
	Approved Budget	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-
	Current Approved Budget	-	-	-	-	-	-	-	-	-	-	-	-

BUDGET REQUEST	Budget Request	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898
	Revised Funding Sources (if approved)												
	Financial Stabilization Resrv.	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898
	Requested Funding Source	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898
	Requested Funding Source												
	Financial Stabilization Resrv.	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898
	Requested Funding Source	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898

## CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2021	2022	2023	2024	2025	2026	2027	2028	2029	Beyond 2029	Total
		Equip FurnFixt	-	1,966	3,932	-	-	-	-	-	-	-	-
	Total	-	1,966	3,932	-	-	-	-	-	-	-	-	5,898

## OPERATING IMPACT OF CAPITAL

Type of Impact: Interdepartmental

Branch:	2022				2023				2024				2025			
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Edmonton Transit Service	-	167	167	-	-	333	333	-	-	-	-	-	-	-	-	-
<b>Total Operating Impact</b>	-	<b>167</b>	<b>167</b>	-	-	<b>333</b>	<b>333</b>	-	-	-	-	-	-	-	-	-